



PATENT
Attorney Docket No.: 018547-019420US
Client Reference No.: 3014.1A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

DAVID J. LOCKHART et al.

Application No.: 09/880,727

Filed: June 13, 2001

For: NUCLEIC ACID ANALYSIS
TECHNIQUES

Examiner: Jezia Riley

Art Unit: 1637

SUPPLEMENTAL INFORMATION
DISCLOSURE STATEMENT UNDER 37
CFR §1.97 and §1.98

Commissioner for Patents
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Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the references may be found on a CD rom which is enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom. This Supplemental Information Disclosure Statement is being filed in response to a Communication from Examiner mailed 6/11/03.

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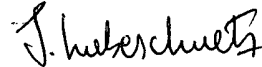
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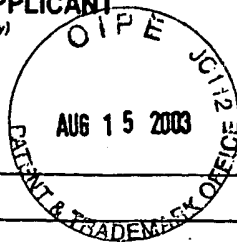
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Application Number	09/880,727
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First Named Inventor	Lockhart
Group Art Unit	1637
Examiner Name	Jezia Riley

Sheet 1 of 1

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US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
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		PANKIEWICZ, K.W., et al., "Selective Methylation of the C-Nucleoside, ψ -Isocytidine and its 2'-Deoxy Analog. Synthesis of 1-Methyl, 3-Methyl and 4-O-Methyl Derivatives", Tetrahedron, Vol. 40, No. 1, (1984), pp. 33-38	

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Application Number	09/880,727
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First Named Inventor	Lockhart
Group Art Unit	1637
Examiner Name	Jezia Riley
Attorney Docket No:	018547-019420US

Sheet 1 of 9

US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date if Appropriate
	US-3,352,849	11/14/1967	Shen, T., et al	260	211.5	10/24/1965
	US-3,817,837	06/18/1974	Rubenstein, et al	195	103.5 R	11/06/1972
	US-3,850,752	11/26/1974	Schuurs, et al	195	103.5 R	10/29/1971
	US-3,891,623	06/24/1975	Vorbruggen, H., et al	260	211.5 R	05/03/1972
	US-3,939,350	02/17/1976	Kronick, M. N., et al	250	365	04/29/1974
	US-3,996,345	12/07/1976	Ullman, E. F., et al	424	12	06/30/1975
	US-4,275,149	06/23/1981	Litman, D. J., et al	435	7	11/24/1978
	US-4,277,437	07/07/1981	Maggio, E. T.	422	61	12/10/1979
	US-4,366,241	12/28/1982	Tom, H. K., et al	435	7	08/07/1980
	US-4,594,339	06/10/1986	Lopez, C., et al	514	42	06/18/1984
	US-4,981,783	01/01/1991	Augenlicht, L.	435	6	04/16/1986
	US-4,997,928	03/05/1991	Hobbs Jr., F. W.	536	27	09/15/1988
	US-5,002,867	03/26/1991	Macevicz, S.C.	435	6	10/24/1988
	US-5,143,854	09/01/1992	Pirung, et al	436	518	03/07/1990
	US-5,151,507	09/29/1992	Hobbs Jr., F. W., et al	536	23	06/12/1991
	US-5,202,231	04/13/1993	Drmanac, R.T., et al	435	6	06/18/1991
	US-5,242,796	09/07/1993	Prober, J. M., et al	435	6	10/22/1991
	US-5,262,536	11/16/1993	Hobbs Jr., F. W.	546	25	12/05/1990
	US-5,324,633	06/28/1994	Fodor, S.P., et al	435	6	11/22/1991
	US-5,332,666	07/26/1994	Prober, J. M., et al	435	91.5	10/22/1991
	US-5,422,241	06/06/1995	Goldrick, M., et al	435	6	07/03/1991
	US-5,424,186	06/13/1995	Fodor, S. P.A., et al	435	6	12/06/1991
	US-5,445,934	08/29/1995	Fodor, S. P.A., et al	435	6	09/30/1992
	US-5,543,292	08/06/1996	Imai, K., et al	435	6	06/14/1993
	US-5,571,639	11/05/1996	Hubbel E.A., et al	430	5	05/24/1994
	US-5,608,063	03/04/1997	Hobbs Jr., F. W., et al	544	244	03/28/1995
	US-5,744,305	04/28/1998	Fodor, S. P.A., et al	435	6	06/06/1995
	US-6,174,998	01/16/2001	Muhlegger, K., et al	536	4.1	09/15/1997
	US-6,211,158	04/03/2001	Seela, F., et al	514	44	06/26/1992

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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T ²
	DE-19509038	09/19/1996	Muhlegger, K.	C07 H	19/06	
	EN-0721016	07/10/1996	Lockhart, D., et al	C12 Q	1/68	

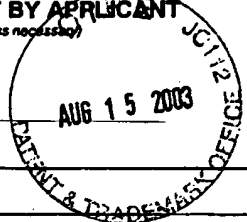
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Examiner Name	Jezia Riley

Sheet 2 of 9

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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T ²
	EP-0132621	02/13/1985	Shirashi, H. , et al	C12 Q	1/68	
	EP-0159719	10/30/1985	Rabbani, E. , et al	C12 Q	1/68	
	EP-0252683	01/13/1988	Prober, J. , et al	C07 H	21/04	
	EP-0266787	05/11/1988	Epplen, J.	C12 Q	1/68	
	EP-0320308	06/14/1989	Backman, K. , et al	C12 Q	1/68	
	EP-0322311	06/28/1989	Kronick, M. , et al	C12 Q	1/68	
	EP-0336731	10/11/1989	Wallace, B.	C12 Q	1/68	
	EP-0535242	04/07/1993	Khrapko, K. , et al	C12 Q	1/68	
	EP-0717113	06/19/1996	Chee, M. , et al	C12 Q	1/68	
	JP-61-109797	05/23/1986	Sugimoto, S. , et al	C07 H	19/04	
	WO-00/06771	02/10/2000	McGall, G. H., et al	C12 Q	1/68	
	WO-89/10977	11/16/1989	Southern, E.	C12 Q	1/68	
	WO-90/00626	01/25/1990	Beattie, K.	C12 Q	1/68	
	WO-90/03370	04/05/1990	Petrie, C. R., et al	C07 D	239/00	
	WO-90/04652	05/03/1990	Macevicz, S.	C12 Q	1/68	
	WO-90/15070	12/13/1990		C07K	1/04	
	WO-92/02258	02/20/1992	Cook, P. D., et al	A61K	48/00	
	WO-92/10092	06/25/1992	Fodor, S. P.A., et al	A01N	1/02	
	WO-92/10588	06/25/1992	Fodor, S. , et al	C12 Q	1/68	
	WO-93/16094	08/19/1993	Whitlock, T. W.	C07 H	21/00	
	WO-93/17126	09/02/1993	Chetverin, A. , et al	C12 Q	1/68	
	WO-95/00530	05/25/1992	Fodor, , et al			
	WO-95/04594	02/16/1995		B01L	3/00	

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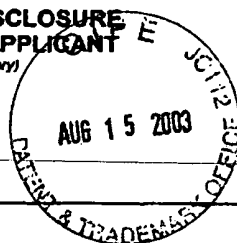
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 Group Art Unit 1637
 Examiner Name Jezia Riley

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	WO-95/04833	02/16/1995		C12 Q	1/68	
	WO-95/04834	02/16/1995		C12 Q	1/682	
	WO-95/11995	05/04/1995	Chee, , et al	C12 Q	1/68	
	WO-95/20681	08/03/1995		C12 Q	1/68	
	WO-95/30774	11/16/1995		C12 Q	1/68	
	WO-95/35505	12/28/1995		G01 N	33/543	
	WO-96/28460	09/19/1996	Muhlegger, K. , et al	C07 H	21/00	
	WO-97/10365	03/20/1997	Lockhart, D. J.	C12 Q	1/68	
	WO-97/27317	07/31/1997		C12 Q	1/00	
	WO-97/28176	08/07/1997	Brown, D. , et al	C07 H	19/044	
	WO-97/29212	08/14/1997		C12 Q	1/68	
	WO-97/39120	10/23/1997	Chaudhary, N. , et al	C12 N	15/11	
	WO-98/11104	03/19/1998		C07 D	405/04	

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

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		AKITA, Y., et al. , "Cross-Coupling Reaction of Chloropyrazines with Acetylenes", <u>Chemical & Pharmaceutical Bulletin</u> , 34 (4), (April 1986), pp. 1447-1458	
		AOYAGI, M., et al. , "Nucleosides and Nucleotides. 115. Synthesis of 3-Alkyl-3-Deazainosines via Palladium-Catalyzed Intramolecular Cyclization: A New Conformational Lock with the Alkyl Group at the 3-Position of the 3-Deazainosine in Anti-Conformation", <u>Tetrahedron Letters</u> , 34 (1), (1993), pp. 103-106	
		AVILA, J.L. , et al. , "Biological Action of Pyrazolopyrimidine Derivatives Against Trypanosoma Cruzi. Studies In Vitro and In Vivo", <u>Comp. Biochem. Physiol.</u> , 86C (1), (1987), pp. 49-54	
		BARRINGER, et al. , "Blunt-end and single-strand ligations by Escherichia coli	

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* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. * Applicant's unique citation designation number (optional) * Applicant is to place a check mark here if English language Translation is attached

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		ligase: influence on an in vitro amplification scheme", <u>Gene</u> , 89, (1990),pp. 117-122	
		BASNAK, I., et al. , "Some 6-Aza-5-Substituted-2'-Deoxyuridines Show Potent and Selective Inhibition of Herpes Simplex Virus Type 1 Thymidine Kinase", <u>Nucleosides & Nucleotides</u> , 17 (1-3), (1998),pp. 187-208	
		BEABEALASHVILLI, R..S. ,et al. , "Nucleoside 5'-triphosphates modified at sugar residues as substrates for calf thymus terminal deoxynucleotidyl transferase and for AMV reverse transcriptase", <u>Biochimica et Biophysica Acta</u> , 868, (1986),pp. 136-144	
		BERGERON, et al. , "Reagents for the stepwise functionalization of spermine", <u>J. Org. Chem.</u> , 53, (1998),pp. 3108-3111	
		BERGSTROM, D..E. , et al. , "Design and Synthesis of Heterocyclic Carboxamides as Natural Nucleic Acid Base Mimics", <u>Nucleosides & Nucleotides</u> , 15 (1-3), (1996),pp. 59-68	
		BOBEK, M., et al. , "Nucleic Acids Components and their Analogues. XCvII. Synthesis of 5-Hydroxymethyl-6-Aza-2'- Deoxyuridine and 5-Hydroxymethyl-6-Aza-2'-Deoxycytidine", <u>Collection Czechoslov. Chem. Commun.</u> , 32, (1967),pp. 3581-3586	
		BRODY, R..S. ,et al. , "The Purification of Orotidine-5'-phosphate Decarboxylase from Yeast by Affinity Chromatography", <u>The Journal of Biological Chemistry</u> , 254 (10), (1979),pp. 4238-4244	
		BROUDE, N.E., et al. , "Enhanced DNA sequencing by hybridization", <u>PNAS</u> , 91, (1994),3072-3076	
		CANARD, B., et al. , "Catalytic editing properties of DNA polymerases", <u>PNAS</u> , 92, (nov. 1995),pp. 10859-10863	
		CECH, D., et al. , "New Approaches Toward the Synthesis of Non-Radioactively Labelled Nucleoside Triphosphates as Terminators for DNA Sequencing", <u>Collect. Czech. Chem. Commun.</u> , 61, Special Issue, (1996),pp. S297-S300	
		CHEE, M., et al. , "Accessing Genetic Information with High-Density DNA Arrays", <u>Science</u> , 274, (Oct. 25, 1996),pp. 610-614	
		CHERNETSKII, V..P. ,et al. , "Anomalous nucleosides and related compounds. XIV. Derivatives of 6-azacytidine.", <u>Chemical Abstracts</u> , 74 (21), Abstract No. 112367j, (1971),	
		CHIDGEA VADEZ, Z..G. ,et al. , "2', 3' -Dideoxy-3' aminonucleoside 5'-triphosphates are the terminators of DNA synthesis catalyzed by DNA polymerases", <u>Nucleic Acids Research</u> , 12 (3), (1984),pp. 1671-1686	
		CHU, et al. , "General Synthesis of 2', 3' -dideoxynucleosides and 2', 3' -dideoxy-2', 3' -dideoxynucleosides", <u>J. Org. Chem.</u> , 54, (1989),pp. 2217-2225	
		COTTAM, HOWARD.B. ,et al. , "New Adenosine Kinase Inhibitors with Oral Antiinflammatory Activity: Synthesis and Biological Evaluation", <u>Journal of Medicinal Chemistry</u> , 36 (22), (Oct. 29, 1993),pp. 3424-3430	

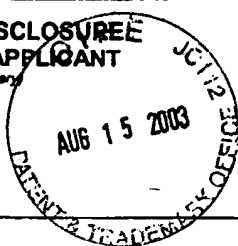
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Sheet 5 of 9

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OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

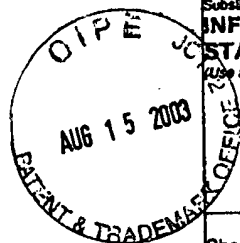
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		CURRIDEN, M., "A New Evidence Tool - First Use of Mitochondrial DNA Test in a U.S. criminal trial", <u>ABA Journal</u> , (Nov. 1996), 1 p.	
		DANSHCER, et al., "Autometallographic silver amplification of colloidal gold", <u>J. Histochem.</u> , 16, (1993), pp. 201-207	
		DEPELLEY, J., et al., "New Non-Aromatic Triazinic Nucleosides : Synthesis and Antiretroviral Evaluation of Beta-Ribosylamine Nucleoside Analogs", <u>Nucleosides & Nucleotides</u> , 15 (5), (1996), pp. 995-1008	
		DUEHOLM, et al., "2,3-dideoxy-furanoses in convergent synthesis of 2',3'-dideoxy nucleosides", <u>Synthesis</u> , (1992), pp. 1-22	
		EDO, K., et al., "Studies on Pyrimidine Derivatives. IX. Coupling Reaction of Mono-substituted Acetylenes with Iodopyrimidines", <u>Chemical & Pharmaceutical Bulletin</u> , 26 (12), (Dec. 1978), pp. 3843-3850	
		EGGERS, M., et al., "A Microchip for Quantitative Detection of Molecules Utilizing Luminescent and Radioisotope Reporter Groups", <u>BioTechniques</u> , 17 (3), (1994), 516-525	
		FELDMAN, W., et al., "Gray Code Masks for Sequencing by Hybridization", <u>Genomics</u> , 23, (1994), 233-235	
		FODOR, et al., "Light-directed, spatially addressable parallel chemical synthesis", <u>Science</u> , 251, (1991), 767-773	
		FRESKOS, J.N., "Synthesis of 2'-Deoxypyrimidine Nucleosides Via Copper (I) Iodine Catalysis", <u>Nucleosides & Nucleotides</u> , 8 (4), (1989), pp. 549-555	
		GALUSHKO, S.V., et al., "Relationship between retention parameters in reversed-phase high-performance liquid chromatography and antitumour activity of some pyrimidine bases and nucleosides", <u>Journal of Chromatography</u> , 547, (1991), pp. 161-166	
		GALUSHKO, S.V., et al., "Reversed-phase HPLC of N4-and O'-derivatives of 6-azacytidine", <u>Chemical Abstracts</u> , 111 (26), Abstract No. 243960u, (1990),	
		GRZYBOWSKI, J., et al., "Synthesis and antibody-mediated detection of oligonucleotides containing multiple 2,4-dinitrophenyl reporter groups", <u>Nucleic Acids Research</u> , 21 (8), (1993), pp. 1705-1712	
		GUATELLI, et al., "Isothermal, in vitro amplification of nucleic acids by a multienzyme reaction modeled after retroviral replication", <u>PNAS</u> , 87, (1990), pp. 1874-1878	
		HAMILTON, H., et al., "C4-Substituted 1-beta-D-Ribofuranosylpyrazolo[3,4-d]pyrimidines as Adenosine Agonist Analogues", <u>J. Med. Chem.</u> , 26 (11), (1993), pp. 1601-1606	
		HERRLEIN, et al., "5',3'-amino-modified nucleotides useful as potent chain terminators for current DNA sequencing methods", <u>Helv. Chim. Acta</u> , 77, (1994), pp. 586-596	
		HOBBS, JR., F.W., et al., "Palladium-catalyzed synthesis of alkynylamino nucleosides. A universal linker for nucleic acids", <u>J. Org. Chem.</u> , 54, (1989), pp.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	
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Application Number	09/880,727
Filing Date	June 13, 2001
First Named Inventor	Lockhart
Group Art Unit	1637
Examiner Name	Jezia Riley
Attorney Docket No: 018547-019420US	
Sheet 6 of 9	

OTHER DOCUMENTS – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		3420-3422	
		HOHEISEL, J.D., "Application of Hybridization Techniques to Genome Mapping and...", <u>Trend in Genetics</u> , 10 (3), (1994), 79-83	
		HOLY, A., et al., "Oligonucleotidic Compounds. XVII. Synthesis of Oligonucleotides Containing 6-Azaauridine and 6-Azacytidine", <u>Collection Czechoslov. Chem. Commun.</u> , 32, (1967), pp. 2980-2997	
		IZUTA, S., et al., "Chain Termination with Sugar-Modified Nucleotide Analogs in the DNA Synthesis by DNA Polymerase Y", <u>Nucleosides & Nucleotides</u> , 15 (1-3), (1996), pp. 683-692	
		JOHNSON, W.T., et al., "The Synthesis and stability of oligodeoxyribonucleotides containing the deoxyadenosine mimic 1-(2'-deoxy-beta-D-ribofuranosyl)imidazole-4-carboxamide", <u>Nucleic Acids Research</u> , 25 (3), (1997), pp. 559-567	
		KALLIONIEMI, A., et al., "Comparative Genomic Hybridization for Molecular Cytogenetic...", <u>Science</u> , 258, (1992), 818-821	
		KHRAPKO, K.R., et al., "An Oligonucleotide Hybridization Approach to DNA Sequencing", <u>FEBS Letters</u> , 256, (1989), 118-122	
		KOHLER, P., et al., "264. Nucleoside und Nucleotide. Teil 15. Synthese von Desoxyribonucleosid-monophosphaten und -triphosphaten mit 2 (1 H)-Pyrimidinon, 2 (1 H)-Pyridinon und 4-Amino-2 (1 H)-pyridinon als Basen", <u>Helvetica Chimica Acta</u> , 63, (1980), pp. 2488-2494	
		KUTATELADZE, T., et al., "3'-Deoxy-3'-aminonucleoside 5'-triphosphates--- Terminators of RNA synthesis, catalyzed by DNA-dependent RNA polymerase from <i>Escherichia coli</i> ", <u>FEBS Letters</u> , 153 (2), (March 1983), pp. 420-426	
		KWOH, et al., "Transcription-based amplification system and detection of amplified human immunodeficiency virus type 1 with a bead-based sandwich hybridization format", <u>PNAS</u> , 86, (1989), pp. 1173-1177	
		LANDEGREN, et al., "A ligase-mediated gene detection technique", <u>Science</u> , 241, (1988), pp. 1077-1080	
		LANGER, et al., "Enzymatic synthesis of biotin-labeled polynucleotides: Novel nucleic acid affinity probes", <u>PNAS</u> , 78, (1981), pp. 6633-6637	
		LAZURKEVICH, Z.V., et al., "Growth activity of 6-substituted azauracils", <u>Chemical Abstracts</u> , 102 (25), Abstract No. 216761w, (1985),	
		LE BEC, C., et al., "Derivatives of Imidazole-4-Carboxamide as Substrates for Various DNA Polymerases", <u>Nucleosides & Nucleotides</u> , 167 (7-9), (1997), pp. 1301-1302	
		LENNON, G.G., et al., "Hybridization analyses of arrayed cDNA libraries", <u>Trends in genetics</u> , 7 (10), (1991), 314-317	
		LIPSHUTZ, R.J., et al., "Using Oligonucleotide Probe Arrays to Access Genetic Diversity", <u>Biotechniques</u> , 19 (3), (1995), 442-447	
		LOCKHART, D.J., et al., "Expression monitoring by hybridization to high-	

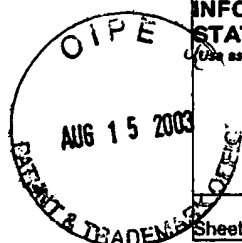
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Application Number	09/880,727
Filing Date	June 13, 2001
First Named Inventor	Lockhart
Group Art Unit	1637
Examiner Name	Jezia Riley

Sheet 7 of 9

Attorney Docket No: 018547-019420US**OTHER DOCUMENTS – NON PATENT LITERATURE DOCUMENTS**

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		density...", <u>Nature Biotechnology</u> , 14 (13), (1996),1675-1680	
		LUDWIG,et al. , "Rapid and efficient synthesis of nucleoside 5'-O-(1-thiotriphosphates), 5'-triphosphates and 2',3'-cyclophosphorothioates using 2-chloro-4H-1,3,2-benzodioxaphosphorin-4-one", <u>J. Org. Chem.</u> , 54, (1989),pp. 631-635	
		MIKKELSEN,et al. , "Genetics of the malignant progression of astrocytoma", <u>J. Cell. Biochem.</u> , 46, (1991),pp. 3-8	
		MIRKIN,et al. , "A DNA-based method for rationally assembling nanoparticles into macroscopic materials", <u>Nature</u> , 382, (1996),pp. 607-609	
		MISURA, K.,et al. , "Biotinyl and phosphotyrosinyl phosphoramidite derivatives useful in the incorporation of multiple reporter groups on synthetic oligonucleotides", <u>Nucleic Acids Research</u> , 18 (15), (1990),pp. 4345-4354	
		MITCHELL,et al. , "Synthesis and antiviral properties of 5-(2-substituted vinyl)-6-aza-2'-deoxyuridines", <u>J. Chem. Med.</u> , 29, (1986),pp. 809-816	
		NELSON, P.S., et al. , "Oligonucleotide labelling methods 3. Direct labeling of oligonucleotides employing a novel, non-nucleosidic, 2-aminobutyl-1, 3-propanediol backbone", <u>Nucleic Acids Research</u> , 20 (23), (1992),pp. 6253-6259	
		NIEBALLA,et al. , "A general synthesis of N-glycosides. I. Synthesis of pyrimidine nucleosides", <u>J. Org. Chem.</u> , 39, (1974),pp. 3654-3660	
		NISHIDA, M.,et al. , "Facile Perfluoroalkylation of Uraciles and Uridines at the C-5 Position", <u>Journal of Fluorine Chemistry</u> , 63, (1993),pp. 43-52	
		OHSAWA, A.,et al. , "Alkynylation of Halopyridazines and Their N-Oxides", <u>Chemical & Pharmaceutical Bulletin</u> , 28 (12), (Dec. 1980),pp. 3488-3493	
		PETRIE,et al. , "A novel biotinylated adenylyl analogue derived from pyrazolo [3,4-d]pyrimidine for labeling DNA probes", <u>Bioconjugate Chem.</u> , 2, (1991),pp. 441-446	
		PEVZNER, P.A.,et al. , "Improved Chips for Sequencing by Hybridization", <u>Journal of Biomolecular Structure</u> , (1991),339-410	
		PIRRUNG,et al. , "A convenient procedure for the deprotection of silylated nucleosides and nucleotides using triethylamine trihydrofluoride", <u>Bioorg. Med. Chem. Lett.</u> , 4, (1994),pp. 1345-1346	
		POCHET, S.,et al. , "Ambiguous Base Pairing of 1-(2-Deoxy-beta-D-Ribofuranosyl) Imidazole-4-Carboxamide During PCR", <u>Nucleosides & Nucleotides</u> , 16 (7-9), (1997),pp. 1749-1752	
		POCHET,et al. , "Enzymatic synthesis of 1-(2-deoxy-beta-D-ribofuranosyl) imidazole-4-carboxamide, a simplified DNA building block", <u>Bioorg. Med. Chem. Lett.</u> , 5, (1995),pp. 1679-1684	
		POCHET, S.,et al. , "Synthesis and enzymatic polymerisation of 5-amino-1-(2'-deoxy-beta-D-ribofuranosyl) imidazole-4- carboxamide-5'-triphosphate", <u>Nucleic Acids Research</u> , 18 (23), (Dec. 11, 1990),pp. 7127-7131	
		PROBER, JAMES.M., et al. , "A System for Rapid DNA Sequencing with	

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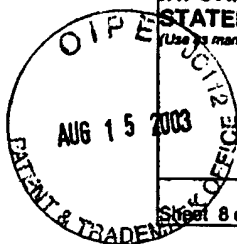
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Application Number 09/880,727
Filing Date June 13, 2001
First Named Inventor Lockhart
Group Art Unit 1637
Examiner Name Jezia Riley

Attorney Docket No: 018547-019420US

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		Fluorescent Chain-Terminating Dideoxynucleotides", <u>Science</u> , 238, (Oct. 16, 1987), pp. 336-341	
		PRYSTAS, M., et al., "Nucleic Acids Components and their Analogues. CXXI. Glycosylation of 6-Azathymine by the Silylation Process", <u>Collection Czechoslov. Chem. Commun.</u> , 34, (1969), pp. 1104-1107	
		RIDEOUT, J.L., et al., "Pyrazolo[3,4-d]pyrimidine Ribonucleosides as Anticoccidials. 2. Synthesis and Activity of Some Nucleosides of 4-(Alkylamino)-1H-Pyrazolo[3,4-d]pyrimidines", <u>J. Med. Chem.</u> , 25 (9), (1982), pp. 1040-1044	
		ROBINS, et al., "Nucleic acid related compounds. 42. A general procedure for the efficient deoxygenation of secondary alcohols. Regiospecific and stereoselective conversion of ribonucleosides to 2'-deoxynucleosides", <u>J. Amer. Chem. Soc.</u> , 105, (1983), pp. 4059-4065	
		ROBINS, et al., "Potential purine antagonists. I. Synthesis of some 4,6-substituted pyrazolo [3,4-d]pyrimidines", <u>J. Amer. Chem. Soc.</u> , 78, (1995), pp. 784-790	
		ROSEMEYER, H., et al., "Stereochemical Effects of Modified Purines on the Sugar Conformation of Nucleosides and Fluorescence Properties", <u>Nucleosides & Nucleotides</u> , 16 (5&6), (1997), pp. 821-828	
		SALA, M., et al., "Ambiguous base pairing of the purine analogue 1-(2-deoxy-beta-D-ribofuranosyl)-imidazole-4-carboxamide during PCR", <u>Nucleic Acids Research</u> , 24 (17), (1996), pp. 3302-3306	
		SAMBROOK, et al., "Bacteriophage T4 RNA ligase (Bacteriophage T4-infected E. coli)", In: <u>Molecular Cloning: A Laboratory Manual</u> , 2nd Edition, Cold Spring Harbor Laboratory Press, (1989), pp. 5.66-5.69	
		SCHENA, M., et al., "Parallel human genome analysis: Microarray-based expression...", <u>PNAS</u> , 93, (1996), 10614-10619	
		SEELA, F., et al., "131. 8-Aza-7-deaza-2'-deoxyguanosine: Phosphoramidite Synthesis and Properties of Octanucleotides", <u>Helvetica Chimica Acta</u> , 71, (1988), pp. 1191-1198	
		SEELA, F., et al., "193. 8-Aza-7-deazaadenine N8- and N9- (Beta-D-2'-Deoxyribofuranosides): Building Blocks for Automated DNA Synthesis and Properties of Oligodeoxyribonucleotides", <u>Helvetica Chimica Acta</u> , 71, (1988), pp. 1813-1823	
		SEELA, F., et al., "Alternating d(G-C)3 and d(C-G)3 hexanucleotides containing 7-deaza-2'-deoxyguanosine or 8-aza-7-deaza-2'-deoxyguanosine in place of dG", <u>Nucleic Acids Research</u> , 17 (3), (1989), pp. 901-910	
		SEELA, F., et al., "Synthesis of 7-alkynylated 8-aza-7-deaza-2'-deoxyadenosines via the Pd-catalysed cross-coupling reaction", <u>J. Chem. Soc., Perkin Trans.</u> , 1, (1998), pp. 3233-3239	
		SEELA, F., et al., "Synthesis of oligonucleotides containing pyrazolo[3,4-d]pyrimidines: The influence of 7-substituted 8-aza-7-deazaadenines on the	

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		duplex structure and stability", <u>J. Chem. Soc., Perkin Trans., 1</u> , (1999),pp. 479-488	
		SOUTHERN,et al. ,"Analyzing and comparing nucleic acid sequences by hybridization...", <u>Genomics</u> 1, (1992),1008-1017	
		SOUTHERN, E.M.,et al. ,"Arrays of complementary oligonucleotides for analysing the ...", <u>Nucleic Acids Research</u> , 22 (8), (1994),1368-1373	
		STILLE, J.K. ,et al. ,"Stereospecific Palladium-Catalyzed Coupling Reactions of Vinyl Iodides with Acetylenic Tin Reagents", <u>Journal of the American Chemical Society</u> , 109 (7), (April 1, 1987),pp. 2138-2152	
		STIMPSON, D.I.,et al. ,"Real-Time Detection of DNA Hybridization and Melting on oligonucleotide arrays by using optical wave guides", <u>PNAS</u> , 92, (1995),6379-6383	
		TANJI, K.,et al. ,"Studies on Pyrimidine Derivatives. XXVII. Synthesis of 2- and 4-Pyrimidinyl Ketones by Means of the Hydration of Alkynylprimidines", <u>Chemical & Pharmaceutical Bulletin</u> , 30 (5), (May 1982),pp. 1865-1867	
		THEISEN, P.,et al. ,"Fluorescent Dye Phosphoramidite Labelling of Oligonucleotides", <u>Nucleic Acids Symposium Series</u> , 27, (1992),pp. 99-102	
		UHLENBECK,et al. ,"T4 RNA ligase", In: <u>The Enzymes</u> , XV, Nucleic Acids, Part B, Boyer, P.D., (Ed.), Academic Press,(1982),pp. 31-58	
		WAGES, J..M. ,et al. ,"High-Performance Liquid Chromatography Analysis of PCR Products", In: <u>PCR Strategies</u> , Chapter 11, Academic Press, Inc.,(1995),pp. 140-153	
		WANG,et al. ,"Large-scale identification, mapping, and genotyping of single-nucleotide polymorphisms in the human genome", <u>Science</u> , 280, (1998),pp. 1077-1082	
		WOJCZEWSKI, C.,et al. ,"Synthesis and Application of 3'-Amino-Dye-Terminators for DNA Sequencing", <u>Nucleosides & Nucleotides</u> , 16 (5-6), (1997),pp. 751-754	
		WU,et al. ,"The Ligation amplification reaction (LAR) - Amplification of specific DNA sequences using sequential rounds of template-dependent ligation", <u>Genomics</u> , 4, (1989),pp. 560-569	
		YU,et al. ,"Cyanine dye dUTP analogs for enzymatic labeling of DNA probes", <u>Nucleic Acids Research</u> , 22, (1994),pp. 3226-3232	
		ZHU, Z.,et al. ,"Directly labeled DNA probes using Fluorescent nucleotides with different length linkers", <u>Nucleic Acids Research</u> , 22 (16), (1994),pp. 3418-3422	

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